

Charging Into the New Year

1996 ended with an electric charge, thanks to a record number of major EV announcements by domestic and international automakers, electric utilities, and battery manufacturers in December.

In fact, there was so much news that the ETC has changed its usual one-page *Fast Track* format to a special, expanded year-end issue. We've included all the major EV announcements made in December -- new EV product, EV introduction plans, battery developments, special EV charging rates...the list goes on. These announcements paint a picture of a vital, growing new industry.

The EV market launch is gathering momentum, and we look forward to working with you in 1997 as we continue our "charge" to the future.

News From the Automakers--

Ford Offers Incentive to EV Buyers...

FORD

The first 1,000 buyers of **Ford Motor Company's** 1998 electric *Ranger* pickups will receive a free wall-mount charger, a "perk" worth between \$700 and \$1,000. Ford is presently accepting orders for the 1998 Ford *Ranger* EV, which uses a conductive-type charging system. To qualify for the complimentary charger, the customer order must be placed by March 31, 1997.

...And Unveils 1998 EV Ranger

Ford will unveil the 1998 Ford *Ranger* EV on January 2nd in Los Angeles, prior to the start of the L.A. Auto Show. The event will feature test drives of the *Ranger* EV, as well as Ford's entire line of alternative fuel vehicles. Ford also will announce its partnership with the California Film Commission to promote alternative fuel vehicles.

Ford *Ranger* EV

GM EV1 Attracts Media Attention, High Profile Buyers...

GENERAL MOTORS

Since the December 5th roll-out of **General Motor's** *EV1* in California and Arizona, over 80 people have taken delivery of the *EV1*, including several Hollywood personalities. General Motors'

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Powering Up -- EV Battery News

As automakers prepare to bring EVs to the market in increasing numbers, efforts to commercialize advanced batteries are "heating up."

U.S. Advanced Battery Consortium Update

GM Ovonic will participate in a collaborative effort with the U.S. Advanced Battery Consortium (USABC) to lower the cost of manufacturing nickel-metal hydride batteries. The 15-month, \$8 million program reflects the USABC's increasing emphasis on bringing promising mid-term battery technologies to the market.

GM Ovonic NiMH
Module

Earlier this year, USABC approved a \$11.1 million program with **Saft America** to develop that company's nickel-metal hydride batteries.

Saft NiMH Module

Other Battery Newsbites

- x Toyota** and Matsushita have formed a partnership to manufacture nickel-metal hydride batteries. The new venture, Panasonic EV Energy, will begin operation this month and expects to produce 5,000 to 10,000 units per year over a 3-year period.
- x Ford** has stated its intent to use Panasonic EV Energy's nickel-metal hydride batteries in the 1998 electric Ford Ranger.
- x Nissan** announced that it is satisfied with the tests conducted on the lithium-ion battery packs to be used in the automakers electric-powered van. The van is being developed for demonstrations in California in 1998.
- x** A new partnership between **Ovonic** and Japan's Sanoh Industrial Company will manufacture and market Ovonic's nickel-metal hydride batteries for two- and three-wheeled vehicles in Europe.

Plugging In -- EV Infrastructure News

The introduction of GM's EV1 in California and Arizona, and commitments from other major automakers to bring EVs to the California market, is opening up business opportunities for companies who can provide charging system installation and service.

San Diego Gas & Electric's parent company, Enova Corporation, has committed \$50,000 to develop a network of public EV charging stations in the utility's service area. "Enova Corporation wants to jump start the effort to put in charging stations for people

who drive EVs," said Howard Levin, San Diego Gas & Electric's energy products manager. Levin also noted the utility's commitment to providing special EV incentive rates and customer service to new EV drivers.

Edison EV has formed partnerships with **General Motors** and Delco Electronics to provide authorized charging equipment installation services for the GM *EVI* in California and Arizona. Edison EV will distribute Delco's Magne Charge inductive charging equipment in the two states, and will install EV charging stations in drivers' homes. The company is also collaborating with local government agencies to develop a network of public charging stations.

A Phoenix-based company, Electric Transportation Engineering Corporation, will produce commercial EV charging stations to be installed by **Salt River Project (SRP)**. SRP has already committed to place 12 stations in six locations in and around Phoenix. The sites will provide the EV driver with customer service phone access and charging information, in addition to both conductive and inductive charging.

Automaker News, continued

publicity campaign for the roll-out -- the automaker invested over \$10 million in the television ad campaign -- and the celebrity status of some of the buyers helped propel the vehicle into the national spotlight. The *EVI* even made Jay Leno's Tonight Show monologue and People Magazine featured a note on the car.

...And Launches Fleet Sales of Electric Trucks in Massachusetts

GM has begun its effort to sell battery-powered *Chevy S-10* pickups to fleets throughout the Northeast. The automaker is working with **Boston Edison** to promote and sell the vehicles, which will be delivered to buyers in the spring of 1997. Potential customers are encouraged to call a toll-free number to place an order or inquire about the vehicles, and GM reportedly plans to name dealerships throughout the Northeast states where the trucks will be sold.

Chevy S-10 electric pickup

SOLECTRIA

Solectria Launches Retail Sale of EVs in Northeast...

In December, **Solectria Corporation** became the first automaker to offer electric vehicles directly to the Northeast car-buying public. The *Solectria Force*, a four-door, four-passenger sedan powered by lead-acid batteries, is on display and available for purchase through Mirak Chevrolet-Geo, a local area dealership. Interested buyers can make an appointment to test drive the *Force*, which features a top speed of 70 mph and an average range of approximately 45 miles per charge.

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Solectria Force

...And Provides EVs to New Jersey Commuter Program

As part of a project to encourage commuters to use rail transit, New Jersey has purchased 21 EVs from Solectria. The cars will operate as "station cars," providing commuters with transportation to and from the rail stations only. The program begins in April, 1997.

TOYOTA

Toyota Firms Up EV Introduction Plans

Toyota confirmed its plans to sell the electric *RAV.4* to California fleet buyers beginning in the fall of 1997. The purchase price of the *RAV.4* will be no higher than \$42,000 for the five-passenger sport utility vehicle, which is powered by nickel-metal hydride batteries and features a range in excess of 120 miles per charge.

Toyota *RAV.4*

UNIQUE MOBILITY

Unique Mobility Debuts Electric Commuter Car...

The *Ethos 3*, an electric commuter car developed by **Unique Mobility** and Pinanfarina, debuted in the U.S. in December. The car is a four-door, four-passenger hatchback sedan, designed to be a "roomy" compact car. Powered by **Ovonic** nickel-metal hydride batteries, the car accelerates from 0 to 60 in just over 11 seconds, has a top speed of 78 mph, and can carry four passengers for 150 miles on one charge. Unique Mobility and Pinanfarina plan to produce the car for automotive OEMs to sell under their own nameplates. The car already has been shown in Japan and Taiwan, and will be unveiled in Europe in January.

Unique Mobility *Ethos 3*

...And Signs Deal to Develop Hybrid EV for Taiwan

A Taiwan-based coalition of corporate investors awarded Unique Mobility a \$360,000 contract to develop a hybrid EV for Taiwan. The coalition, known as Pan Asia, was organized through the Taiwanese government. Pan Asia is a licensee of Ovonic's nickel-metal hydride battery technology.

The Electric Transportation Coalition is a national, non-profit organization dedicated to promoting the use of electricity in the transportation sector.

For additional copies of this *Fast Track*, or for more details on the information found in this document, contact the Coalition at (202) 508-5995.